

Application No.: 10/693,013

Docket No.: JCLA9062

Claim Amendment

Please amend the claims according to the following listing of claims and substitute it for all prior versions and listings of claims in the application.

1. (original) An organic light-emitting diode, comprising:

a transparent substrate;

an anode disposed on the transparent substrate;

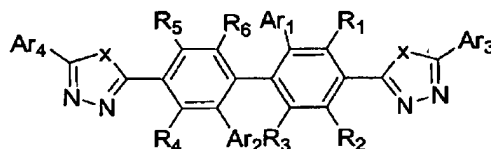
at least one organic functional layer disposed on the anode;

a cathode disposed on the organic functional layer; and

a metal doped layer disposed between the cathode and the organic functional layer,

wherein the metal doped layer comprises an organic compound represented by a formula (1) doped with a metal:

(1)



wherein R₁ ~ R₆ are a hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted alkyloxy, substituted or unsubstituted alkenyl, substituted or unsubstituted amino, substituted or unsubstituted aromatic hydroxyl,

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substituted or unsubstituted polycyclic aromatic or substituted or unsubstituted aromatic alkyl; $Ar_1 \sim Ar_4$ are substituted or unsubstituted aromatic hydroxyl, substituted or unsubstituted polycyclic aromatic, substituted or unsubstituted aromatic alkyl or substituted or unsubstituted aromatic heterocyclic; X is oxygen, sulfur, substituted or unsubstituted amino, or substituted or unsubstituted silane.

2. (original) The organic light-emitting diode of claim 1, wherein one substitute of the functional groups is halogen, cyano or nitro.

3. (currently amended) The organic light-emitting diode of claim 1, wherein a glass transition temperature of the substrate is higher than 100 °C.

4. (currently amended) The organic light-emitting diode of claim 1, wherein the ~~organic compound~~ metal is alkali metal, alkaline-earth metal or transition metal.

5. (original) The organic light-emitting diode of claim 4, wherein the alkali metal is Li, Na, K, Rb or Cs.

6. (original) The organic light-emitting diode of claim 4, wherein the alkaline-earth metal is Be, Mg, Ca, Sr or Ba.

7. (original) The organic light-emitting diode of claim 4, wherein the transition metal is Y, La, Sm or U.

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8. (original) The organic light-emitting diode of claim 1, wherein a work function of the metal is no more than 4.5eV.

9. (original) The organic light-emitting diode of claim 1, wherein the metal doped within the organic compound is 0.5% ~ 10%.

10. (original) The organic light-emitting diode of claim 9, wherein the metal doped within the organic compound is preferred 1% ~ 3%.

11. (original) The organic light-emitting diode of claim 1, wherein the metal doped layer has a thickness from about 0.5nm to about 100nm.

Claims 12-21 (cancelled)